

The connection between acoustics and ecology competition 2024

Prizes to be won!

This activity is designed to help you explore the connection between ecology and acoustics. Soundscapes are the sounds of the things we hear around us. They can be formed from natural sounds (such as a rushing stream or wildlife), sounds made by us (such as talking, playing music or driving cars) or a combination of the two. Your local area will have its own different soundscapes, but have you ever considered how they influence the wildlife around you.

Equipment

You will need:

- Access to a smartphone;
- A method for recording your results.



The Competition

This competition is for a small team of up to 3 students between 11 and 16 years of age. Students can be from different year groups and classes; however, they need to be from the same educational establishment.



BirdNET

Activity: Use the BirdNET app to identify the birds present in three acoustically different areas.

Visit ioa.org.uk for further details

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Task 1: Familiarisation of measurement hardware and software

When measuring sound, it is important to understand the hardware and software that you are using. For this task you need to install the BirdNET app onto a smartphone or multiple smartphones. Please find attached User Guides for BirdNET prepared by members of the Institute of Acoustics.



Task 2: Select three different soundscapes

Think about your local area; can you identify three areas that sound different? Describe the soundscape of each area in a way that makes the differences clear.



Task 3: Comment on the bird species that are present

Use the BirdNET app to identify any birds that are present in each area and discuss the differences between the three areas. Make sure that the measurement programme you devise includes a good selection of time periods and that each measurement duration is a suitable length, requirements.

Deliverables

We would like a brief report describing what you did to familiarise yourselves with the app, and your methodology, results and findings from the measurements. You are welcome to decide which electronic format to use for your report that best suits your entry. See assessment criteria below for more information.

The Prize

The winning entrant(s) will each receive a prize of £25 plus £500 for their school and an engraved crystal trophy.

The winning school will be invited to send up to three students who have participated in the submission, plus one parent per pupil and one teacher, to collect the winning prize in person at this year's Noise Abatement Society's John Connell Awards

ceremony which is being held at the Houses of Parliament in October 2024. Reasonable travel and subsistence expenses will be available.

Please check the IOA website for details on our terms and conditions.

How to Submit your entry

Entries must be submitted in a standard electronic format (e.g. Word, pdf, video or similar) to secondary@ioa.org.uk with the email subject title 'Secondary School Competition Entry from [School Name]'. Please include the name and age of the participating pupils as well as the name and contact details of the school for each competition entry.

The Deadline

The deadline for entries is 31 July, 2024. Entries will be judged by a panel of experts. The decisions of the judging panel will be final.

Health and Safety

Participation in this competition must comply with the relevant health and safety requirements that apply to this type of activity at your school.

Unless otherwise indicated by yourselves, if you choose to submit a video you are confirming consent for it to be used for Institute of Acoustics publicity purposes.

The Assessment Criteria

- Age of the entrants (this will be taken into account when assessing the quality of the report);
- Number of students in the group (this will also be taken into account when assessing the quality of the report);
- Suitability and ingenuity of the format of the entry deliverable;
- Presentation of the entry, including any photographs or audio;
 - Content, including
 - Description of the methodology;
 - Description of soundscapes;
 - Description of bird species;
 - Scientific conclusions;
- Development of acoustic ideas introduced by the competition.

